In the Specification:

Please amend the specification as shown:

Please delete paragraph [00172] on pages 72 and 73, and replace it with the following paragraph:

[00172] The substrate for the assay is the peptide Ac-FKKSFKL-NH_2 **(SEQ ID NO: 208),** derived from the myristoylated alanine-rich protein kinase C substrate protein (MARCKS). The K_m of the enzyme for this peptide is approximately 50 μM. Other basic, protein kinase C-selective peptides known in the art can also be used, at a concentration of at least 2-3 times their K_m. Cofactors required for the assay include calcium, magnesium, ATP, phosphatidylserine and diacylglycerol. Depending upon the intent of the user, the assay can be performed to determine the amount of PKC present (activating conditions) or the amount of active PKC present (non-activating conditions). For most purposes according to the invention, non-activating conditions will be used, such that the PKC, that is active in the sample when it is isolated, is measured, rather than measuring the PKC that can be activated. For non-activating conditions, calcium is omitted from the assay in favor of EGTA.

Please delete paragraph [00181] on page 75, and replace it with the following paragraph:

[00181] Direct assays for tyrosine kinase activity using known synthetic or natural tyrosine kinase substrates and labeled phosphate are well known, as are similar assays for other types of kinases (e.g., Ser/Thr Kinases). Kinase assays can be performed with both purified kinases and crude extracts prepared from cells expressing a T1R or T2R polypeptide, treated with or without a candidate modulator. Control reactions should be performed using mock-transfected cells, or extracts from them in order to exclude possible non-specific effects of some candidate modulators. Substrates can be either full-length protein or synthetic peptides representing the substrate. Pinna & Ruzzene (Biochem. Biophys. Acta 1314: 191-225 (1996) **(139)**) list a number of phosphorylation substrate sites useful for detecting kinase activities. A number of kinase substrate peptides are commercially available. One that is particularly useful is the "Src-related peptide," RRLIEDAEYAARG **(SEQ ID NO: 209)** (available from Sigma # A7433), which is a substrate for many receptor and nonreceptor tyrosine kinases. Because the assay described below required

binding of peptide substrates to filters, the peptide substrates should have a net positive charge to facilitate binding. Generally, peptide substrates should have at least 2 basic residues and a free amino terminus. Reactions generally use a peptide concentration of 0.7-1.5 mM.

Please delete paragraph [00196] on pages 80-81, and replace it with the following paragraph:

[00196] The NF-KB binding element has the consensus sequence GGGGACTTTCC **(SEQ ID NO: 210)**. A large number of genes have been identified as NF-KB responsive, and their control elements can be linked to a reporter gene to monitor GPCR activity. A small sample of the genes responsive to NF-KB includes those encoding IL-1ß. (Hiscott et al., *Mol. Cell. Biol.* 13:6231-6240 (1993)**(148)**), TNF-α (Shakhov et al., *J. Exp. Med.* 171: 35-47 (1990)**(149)**), CCR5 (Liu et al., AIDS Res. Hum. Retroviruses 14: 1509-1519 (1998) **(150)**), P-selectin (Pan & McEver, *J. Biol. Chem.* 270: 23077-23083 (1995) **(151)**), Fas ligand (Matsui et al., *J. Immunol.* 161: 3469-3473 (1998) **(152)**), GM-CSF (Schreck & Baeuerle, *Mol. Cell. Biol.* 10: 1281-1286 (1990) **(153)**) and IKβα (Haskill et al., *Cell* 65: 1281-1289 (1991) **(154)**). Vectors encoding NF-KB-responsive reporters are also known in the art or can be readily made by one of skill in the art using, for example, synthetic NF-KB elements and a minimal promoter, or using the NF-KB-responsive sequences of a gene known to be subject to NF-KB regulation. Further, NF-KB responsive reporter constructs are commercially available e.g. from CLONTECH.

Please delete from page 213, line 19, through page 219, line 44, and replace it with the following paragraphs:

hT2R51 Full-Length cDNA (BAC AC011654) (SEQ ID NO: 172)

ATGTTGACTCTAACTCGCATCCGCACTGTGTCCTATGAAGTCAGGAGTACATTTCTGTTCA
TTTCAGTCCTGGAGTTTGCAGTGGGGTTTCTGACCAATGCCTTCGTTTTCTTGGTGAATTTT
TGGGATGTAGTGAAGAGGCAGGCACTGAGCAACAGTGATTGTGTGCTGCTGTGTCTCAGC
ATCAGCCGGCTTTTCCTGCATGGACTGCTGTTCCTGAGTGCTATCCAGCTTACCCACTTCCA
GAAGTTGAGTGAACCACTGAACCACAGCTACCAAGCCATCATCATGCTATGGATGATTGCA
AACCAAGCCAACCTCTGGCTTGCTGCCTGCCTCAGCCTGCTTTACTGCTCCAAGCTCATCC
GTTTCTCTCACACCTTCCTGATCTGCTTGGCAAGCTGGGTCTCCAGGAAGATCTCCCAGAT
GCTCCTGGGTATTATTCTTTGCTCCTGCATCTGCACTGTCCTCTGTGTTTGGTGCTTTTTTA
GCAGACCTCACTTCACAGTCACAACTGTGCTATTCATGAATAACAATACAAGGCTCAACTG
GCAGATTAAAGATCTCAATTTATTTTATTCCTTTCTCTTCTGCTATCTGTGGTCTGTGCCTC
CTTTCCTATTGTTTCTGGTTTCTTCTGGGATGCTGACTGTCTCCCTGGGAAGGCACATGAGG
ACAATGAAGGTCTATACCAGAAACTCTCGTGACCCCAGCCTGGAGGCCCACATTAAAGCCC

TCAAGTCTCTTGTCTCCTTTTTCTGCTTCTTTGTGATATCATCCTGTGTTGCCTTCATCTCTG
TGCCCCTACTGATTCTGTGGCGCGACAAAATAGGGGTGATGGTTTGTGTTGGGATAATGGC
AGCTTGTCCCTCTGGGCATGCAGCCATCCTGATCTCAGGCAATGCCAAGTTGAGGAGAGCT
GTGATGACCATTCTGCTCTGGGCTCAGAGCAGCCTGAAGGTAAGAGCCGACCACAAGGCA
GATTCCCGGACACTGTGCTGA ~~(SEQ ID NO: 1)~~

hT2R51 Conceptual Translation (BAC AC011654) (SEQ ID NO: 173)

MLTLTRIRTVSYEVRSTFLFISVLEFAVGFLTNAFVFLVNFWDVVKRQALSNSDCVLLCLSISRL
FLHGLLFLSAIQLTHFQKLSEPLNHSYQAIIMLWMIANQANLWLAACLSLLYCSKLIRFSHTFLI
CLASWVSRKISQMLLGIILCSCICTVLCVWCFFSRPHFTVTTVLFMNNNTRLNWQIKDLNLFYS
FLFCYLWSVPPFLLFLVSSGMLTVSLGRHMRTMKVYTRNSRDPSLEAHIKALKSLVSFFCFFVIS
SCVAFISVPLLILWRDKIGVMVCVGIMAACPSGHAAILISGNAKLRRAVMTILLWAQSSLKVRA
DHKADSRTLC ~~(SEQ ID NO: 2)~~

hT2R54 Full-Length cDNA (BAC AC024156) (SEQ ID NO: 174)

ATGACTAAACTCTGCGATCCTGCAGAAAGTGAATTGTCGCCATTTCTCATCACCTTAATTTT
AGCAGTTTTACTTGCTGAATACCTCATTGGTATCATTGCAAATGGTTTCATCATGGCTATAC
ATGCAGCTGAATGGGTTCAAAATAAGGCAGTTTCCACAAGTGGCAGGATCCTGGTTTTCCT
GAGTGTATCCAGAATAGCTCTCCAAAGCCTCATGATGTTAGAAATTACCATCAGCTCAACC
TCCCTAAGTTTTTATTCTGAAGACGCTGTATATTATGCATTCAAAATAAGTTTTATATTCTT
AAATTTTTGTAGCCTGTGGTTTGCTGCCTGGCTCAGTTTCTTCTACTTTGTGAAGATTGCCA
ATTTCTCCTACCCCCTTTTCCTCAAACTGAGGTGGAGAATTACTGGATTGATACCCTGGCTT
CTGTGGCTGTCCGTGTTTATTTCCTTCAGTCACAGCATGTTCTGCATCAACATCTGCACTGT
GTATTGTAACAATTCTTTCCCTATCCACTCCTCCAACTCCACTAAGAAAACATACTTGTCTG
AGATCAATGTGGTCGGTCTGGCTTTTTTCTTTAACCTGGGGATTGTGACTCCTCTGATCATG
TTCATCCTGACAGCCACCCTGCTGATCCTCTCTCTCAAGAGACACACCCTACACATGGGAA
GCAATGCCACAGGGTCCAACGACCCCAGCATGGAGGCTCACATGGGGGCCATCAAAGCTA
TCAGCTACTTTCTCATTCTCTACATTTTCAATGCAGTTGCTCTGTTTATCTACCTGTCCAAC
ATGTTTGACATCAACAGTCTGTGGAATAATTTGTGCCAGATCATCATGGCTGCCTACCCTG
CCAGCCACTCAATTCTACTGATTCAAGATAACCCTGGGCTGAGAAGAGCCTGGAAGCGGCT
TCAGCTTCGACTTCATCTTTACCCAAAAGAGTGGACTCTGTGA ~~(SEQ ID NO: 3)~~

hT2R54 Conceptual Translation (BAC AC024156) (SEQ ID NO: 175)

MTKLCDPAESELSPFLITLILAVLLAEYLIGIIANGFIMAIHAAEWVQNKAVSTSGRILVFLSVSRI
ALQSLMMLEITISSTSLSFYSEDAVYYAFKISFIFLNFCSLWFAAWLSFFYFVKIANFSYPLFLKL
RWRITGLIPWLLWLSVFISFSHSMFCINICTVYCNNSFPIHSSNSTKKTYLSEINVVGLAFFFNLGI
VTPLIMFILTATLLILSLKRHTLHMGSNATGSNDPSMEAHMGAIKAISYFLILYIFNAVALFIYLS
NMFDINSLWNNLCQIIMAAYPASHSILLIQDNPGLRRAWKRLQLRLHLYPKEWTL ~~(SEQ ID NO: 4)~~

hT2R55 Full-Length cDNA (BAC AC024156) (SEQ ID NO: 176)

ATGGCAACGGTGAACACAGATGCCACAGATAAAGACATATCCAAGTTCAAGGTCACCTTC
ACTTTGGTGGTCTCCGGAATAGAGTGCATCACTGGCATCCTTGGGAGTGGCTTCATCACGG
CCATCTATGGGGCTGAGTGGGCCAGGGGCAAAACACTCCCCACTGGTGACCGCATTATGTT
GATGCTGAGCTTTTCCAGGCTCTTGCTACAGATTTGGATGATGCTGGAGAACATTTTCAGT
CTGCTATTCCGAATTGTTTATAACCAAAACTCAGTGTATATCCTCTTCAAAGTCATCACTGT
CTTTCTGAACCATTCCAATCTCTGGTTTGCTGCCTGGCTCAAAGTCTTCTATTGTCTTAGAA

TTGCAAACTTCAATCATCCTTTGTTCTTCCTGATGAAGAGGAAAATCATAGTGCTGATGCC
TTGGCTTCTCAGGCTGTCAGTGTTGGTTTCCTTAAGCTTCAGCTTTCCTCTCTCGAGAGATG
TCTTCAATGTGTATGTGAATAGCTCCATTCCTATCCCCTCCTCCAACTCCACGGAGAAGAA
GTACTTCTCTGAGACCAATATGGTCAACCTGGTATTTTTCTATAACATGGGGATCTTCGTTC
CTCTGATCATGTTCATCCTGGCAGCCACCCTGCTGATCCTCTCTCTCAAGAGACACACCCTA
CACATGGGAAGCAATGCCACAGGGTCCAGGGACCCCAGCATGAAGGCTCACATAGGGGCC
ATCAAAGCCACCAGCTACTTTCTCATCCTCTACATTTTCAATGCAATTGCTCTATTTCTTTC
CACGTCCAACATCTTTGACACTTACAGTTCCTGGAATATTTTGTGCAAGATCATCATGGCT
GCCTACCCTGCCGGCCACTCAGTACAACTGATCTTGGGCAACCCTGGGCTGAGAAGAGCCT
GGAAGCGGTTTCAGCACCAAGTTCCTCTTTACCTAAAAGGGCAGACTCTGTGA (SEQ ID NO: 5)

hT2R55 Conceptual Translation (BAC AC024156) (SEQ ID NO: 177)

MATVNTDATDKDISKFKVTFTLVVSGIECITGILGSGFITAIYGAEWARGKTLPTGDRIMLMLSF
SRLLLQIWMMLENIFSLLFRIVYNQNSVYILFKVITVFLNHSNLWFAAWLKVFYCLRIANFNHP
LFFLMKRKIIVLMPWLLRLSVLVSLSFSFPLSRDVFNVYVNSSIPIPSSNSTEKKYFSETNMVNLV
FFYNMGIFVPLIMFILAATLLILSLKRHTLHMGSNATGSRDPSMKAHIGAIKATSYFLILYIFNAI
ALFLSTSNIFDTYSSWNILCKIIMAAYPAGHSVQLILGNPGLRRAWKRFQHQVPLYLKGQTL (SEQ ID NO: 6)

hT2R61 Full-Length cDNA (BAC AC018630) (SEQ ID NO: 178)

ATGATAACTTTTCTACCCATCATTTTTTCCAGTCTGGTAGTGGTTACATTTGTTATTGGAAA
TTTTGCTAATGGCTTCATAGCACTGGTAAATTCCATTGAGTGGTTCAAGAGACAAAAGATC
TCCTTTGCTGACCAAATTCTCACTGCTCTGGCGGTCTCCAGAGTTGGTTTGCTCTGGGTATT
ATTATTAAACTGGTATTCAACTGTGTTGAATCCAGCTTTTAATAGTGTAGAAGTAAGAACT
ACTGCTTATAATATCTGGGCAGTGATCAACCATTTCAGCAACTGGCTTGCTACTACCCTCA
GCATATTTTATTTGCTCAAGATTGCCAATTTCTCCAACTTTATTTTTCTTCACTTAAAGAGG
AGAGTTAAGAGTGTCATTCTGGTGATGTTGTTGGGGCCTTTGCTATTTTTGGCTTGTCATCT
TTTTGTGATAAACATGAATGAGATTGTGCGGACAAAAGAATTTGAAGGAAACATGACTTG
GAAGATCAAATTGAAGAGTGCAATGTACTTTTCAAATATGACTGTAACCATGGTAGCAAA
CTTAGTACCCTTCACTCTGACCCTACTATCTTTTATGCTGTTAATCTGTTCTTTGTGTAAAC
ATCTCAAGAAGATGCAGCTCCATGGTAAAGGATCTCAAGATCCCAGCACCAAGGTCCACA
TAAAAGCTTTGCAAACTGTGATCTCCTTCCTCTTGTTATGTGCCATTTACTTTCTGTCCATA
ATGATATCAGTTTGGAGTTTTGGAAGTCTGGAAAACAAACCTGTCTTCATGTTCTGCAAAG
CTATTAGATTCAGCTATCCTTCAATCCACCCATTCATCCTGATTTGGGGAAACAAGAAGCT
AAAGCAGACTTTTCTTTCAGTTTTTTGGCAAATGAGGTACTGGGTGAAAGGAGAGAAGACT
TCATCTCCATAG (SEQ ID NO: 7)

hT2R61 Conceptual Translation (BAC AC018630) (SEQ ID NO: 179)

MITFLPIIFSSLVVVTFVIGNFANGFIALVNSIEWFKRQKISFADQILTALAVSRVGLLWVLLLNW
YSTVLNPAFNSVEVRTTAYNIWAVINHFSNWLATTLSIFYLLKIANFSNFIFLHLKRRVKSVILV
MLLGPLLFLACHLFVINMNEIVRTKEFEGNMTWKIKLKSAMYFSNMTVTMVANLVPFTLTLLS
FMLLICSLCKHLKKMQLHGKGSQDPSTKVHIKALQTVISFLLLCAIYFLSIMISVWSFGSLENKP
VFMFCKAIRFSYPSIHPFILIWGNKKLKQTFLSVFWQMRYWVKGEKTSSP (SEQ ID NO: 8)

hT2R63 Full-Length cDNA (BAC AC018630) (SEQ ID NO: 180)

ATGATGAGTTTTCTACACATTGTTTTTTCCATTCTAGTAGTGGTTGCATTTATTCTTGGAAA
TTTTGCCAATGGCTTTATAGCACTGATAAATTTCATTGCCTGGGTCAAGAGACAAAAGATC
TCCTCAGCTGATCAAATTATTGCTGCTCTGGCAGTCTCCAGAGTTGGTTTGCTCTGGGTAA
TATTATTACATTGGTATTCAACTGTGTTGAATCCAACTTCATCTAATTTAAAAGTAATAATT
TTTATTTCTAATGCCTGGGCAGTAACCAATCATTTCAGCATCTGGCTTGCTACTAGCCTCAG
CATATTTTATTTGCTCAAGATCGTCAATTTCTCCAGACTTATTTTTCATCACTTAAAAAGGA
AGGCTAAGAGTGTAGTTCTGGTGATAGTGTTGGGGTCTTTGTTCTTTTTGGTTTGTCACCTT
GTGATGAAACACACGTATATAAATGTGTGGACAGAAGAATGTGAAGGAAACGTAACTTGG
AAGATCAAACTGAGGAATGCAATGCACCTTTCCAACTTGACTGTAGCCATGCTAGCAAACT
TGATACCATTCACTCTGACCCTGATATCTTTTCTGCTGTTAATCTACTCTCTGTGTAAACAT
CTGAAGAAGATGCAGCTCCATGGCAAAGGATCTCAAGATCCCAGCACCAAGATCCACATA
AAAGCTCTGCAAACTGTGACCTCCTTCCTCATATTACTTGCCATTTACTTTCTGTGTCTAAT
CATATCGTTTTGGAATTTTAAGATGCGACCAAAAGAAATTGTCTTAATGCTTTGCCAAGCT
TTTGGAATCATATATCCATCATTCCACTCATTCATTCTGATTTGGGGGAACAAGACGCTAA
AGCAGACCTTTCTTTCAGTTTTGTGGCAGGTGACTTGCTGGGCAAAAGGACAGAACCAGTC
AACTCCATAG ~~(SEQ ID NO: 9)~~

hT2R63 Conceptual Translation (BAC AC018630) (SEQ ID NO: 181)

MMSFLHIVFSILVVVAFILGNFANGFIALINFIAWVKRQKISSADQIIAALAVSRVGLLWVILLH
WYSTVLNPTSSNLKVIIFISNAWAVTNHFSIWLATSLSIFYLLKIVNFSRLIFHHLKRKAKSVVLV
IVLGSLFFLVCHLVMKHTYINVWTEECEGNVTWKIKLRNAMHLSNLTVAMLANLIPFTLTLISF
LLLIYSLCKHLKKMQLHGKGSQDPSTKIHIKALQTVTSFLILLAIYFLCLIISFWNFKMRPKEIVL
MLCQAFGIIYPSFHSFILIWGNKTLKQTFLSVLWQVTCWAKGQNQSTP ~~(SEQ ID NO: 10)~~

hT2R64 Full-Length cDNA (BAC AC018630) (SEQ ID NO: 182)

ATGACAACTTTTATACCCATCATTTTTTCCAGTGTGGTAGTGGTTCTATTTGTTATTGGAAA
TTTTGCTAATGGCTTCATAGCATTGGTAAATTCCATTGAGCGGGTCAAGAGACAAAAGATC
TCTTTTGCTGACCAGATTCTCACTGCTCTGGCGGTCTCCAGAGTTGGTTTGCTCTGGGTATT
ATTATTAAATTGGTATTCAACTGTGTTTAATCCAGCTTTTTATAGTGTAGAAGTAAGAACT
ACTGCTTATAATGTCTGGGCAGTAACCGGCCATTTCAGCAACTGGCTTGCTACTAGCCTCA
GCATATTTTATTTGCTCAAGATTGCCAATTTCTCCAACCTTATTTTTCTTCACTTAAAGAGG
AGAGTTAAGAGTGTCATTCTGGTGATGCTGTTGGGGCCTTTACTATTTTTGGCTTGTCAAC
TTTTTGTGATAAACATGAAAGAGATTGTACGGACAAAAGAATATGAAGGAAACTTGACTT
GGAAGATCAAATTGAGGAGTGCAGTGTACCTTTCAGATGCGACTGTAACCACGCTAGGAA
ACTTAGTGCCCTTCACTCTGACCCTGCTATGTTTTTTGCTGTTAATCTGTTCTCTGTGTAAA
CATCTCAAGAAGATGCAGCTCCATGGTAAAGGATCTCAAGATCCCAGCACCAAGGTCCAC
ATAAAAGCTTTGCAAACTGTGATCTTTTTCCTCTTGTTATGTGCCGTTTACTTTCTGTCCAT
AATGATATCAGTTTGGAGTTTTGGGAGTCTGGAAAACAAACCTGTCTTCATGTTCTGCAAA
GCTATTAGATTCAGCTATCCTTCAATCCACCCATTCATCCTGATTTGGGGAAACAAGAAGC
TAAAGCAGACTTTTCTTTCAGTTTTGCGGCAAGTGAGGTACTGGGTGAAAGGAGAGAAGC
CTTCATCTCCATAG ~~(SEQ ID NO: 11)~~

hT2R64 Conceptual Translation (BAC AC018630) (SEQ ID NO: 183)

MTTFIPIIFSSVVVVLFVIGNFANGFIALVNSIERVKRQKISFADQILTALAVSRVGLLWVLLLNW
YSTVFNPAFYSVEVRTTAYNVWAVTGHFSNWLATSLSIFYLLKIANFSNLIFLHLKRRVKSVIL
VMLLGPLLFLACQLFVINMKEIVRTKEYEGNLTWKIKLRSAVYLSDATVTTLGNLVPFTLTLLC
FLLLICSLCKHLKKMQLHGKGSQDPSTKVHIKALQTVIFFLLLCAVYFLSIMISVWSFGSLENKP
VFMFCKAIRFSYPSIHPFILIWGNKKLKQTFLSVLRQVRYWVKGEKPSSP ~~(SEQ ID NO: 12)~~

hT2R65 Full-Length cDNA (BAC AC018630) (SEQ ID NO: 184)

ATGATGTGTTTTCTGCTCATCATTTCATCAATTCTGGTAGTGTTTGCATTTGTTCTTGGAAA
TGTTGCCAATGGCTTCATAGCCCTAGTAAATGTCATTGACTGGGTTAACACACGAAAGATC
TCCTCAGCTGAGCAAATTCTCACTGCTCTGGTGGTCTCCAGAATTGGTTTACTCTGGGTCAT
GTTATTCCTTTGGTATGCAACTGTGTTTAATTCTGCTTTATATGGTTTAGAAGTAAGAATTG
TTGCTTCTAATGCCTGGGCTGTAACGAACCATTTCAGCATGTGGCTTGCTGCTAGCCTCAG
CATATTTTGTTTGCTCAAGATTGCCAATTTCTCCAACCTTATTTCTCTCCACCTAAAGAAGA
GAATTAAGAGTGTTGTTCTGGTGATACTGTTGGGGCCCTTGGTATTTCTGATTTGTAATCTT
GCTGTGATAACCATGGATGAGAGAGTGTGGACAAAAGAATATGAAGGAAATGTGACTTGG
AAGATCAAATTGAGGAATGCAATACACCTTTCAAGCTTGACTGTAACTACTCTAGCAAACC
TCATACCCTTTACTCTGAGCCTAATATGTTTTCTGCTGTTAATCTGTTCTCTTTGTAAACAT
CTCAAGAAGATGCGGCTCCATAGCAAAGGATCTCAAGATCCCAGCACCAAGGTCCATATA
AAAGCTTTGCAAACTGTGACCTCCTTCCTCATGTTATTTGCCATTTACTTTCTGTGTATAAT
CACATCAACTTGGAATCTTAGGACACAGCAGAGCAAACTTGTACTCCTGCTTTGCCAAACT
GTTGCAATCATGTATCCTTCATTCCACTCATTCATCCTGATTATGGGAAGTAGGAAGCTAA
AACAGACCTTTCTTTCAGTTTTGTGGCAGATGACACGCTGA ~~(SEQ ID NO: 13)~~

hT2R65 Conceptual Translation (BAC AC018630) (SEQ ID NO: 185)

MMCFLLIISSILVVFAFVLGNVANGFIALVNVIDWVNTRKISSAEQILTALVVSRIGLLWVMLFL
WYATVFNSALYGLEVRIVASNAWAVTNHFSMWLAASLSIFCLLKIANFSNLISLHLKKRIKSVV
LVILLGPLVFLICNLAVITMDERVWTKEYEGNVTWKIKLRNAIHLSSLTVTTLANLIPFTLSLICF
LLLICSLCKHLKKMRLHSKGSQDPSTKVHIKALQTVTSFLMLFAIYFLCIITSTWNLRTQQSKLV
LLLCQTVAIMYPSFHSFILIMGSRKLKQTFLSVLWQMTR ~~(SEQ ID NO: 14)~~

hT2R67 Full-Length cDNA (BAC AC018630) (SEQ ID NO: 186)

ATGATAACTTTTCTATACATTTTTTTTTCAATTCTAATAATGGTTTTATTTGTTCTCGGAAA
CTTTGCCAATGGCTTCATAGCACTGGTAAATTTCATTGACTGGGTGAAGAGAAAAAAGATC
TCCTCAGCTGACCAAATTCTCACTGCTCTGGCGGTCTCCAGAATTGGTTTGCTCTGGGCATT
ATTATTAAATTGGTATTTAACTGTGTTGAATCCAGCTTTTTATAGTGTAGAATTAAGAATT
ACTTCTTATAATGCCTGGGTTGTAACCAACCATTTCAGCATGTGGCTTGCTGCTAACCTCA
GCATATTTTATTTGCTCAAGATTGCCAATTTCTCCAACCTTCTTTTTCTTCATTTAAAGAGG
AGAGTTAGGAGTGTCATTCTGGTGATACTGTTGGGGACTTTGATATTTTTGGTTTGTCATC
TTCTTGTGGCAAACATGGATGAGAGTATGTGGGCAGAAGAATATGAAGGAAACATGACTG
GGAAGATGAAATTGAGGAATACAGTACATCTTTCATATTTGACTGTAACTACCCTATGGAG
CTTCATACCCTTTACTCTGTCCCTGATATCTTTTCTGATGCTAATCTGTTCTCTGTGTAAAC
ATCTCAAGAAGATGCAGCTCCATGGAGAAGGATCGCAAGATCTCAGCACCAAGGTCCACA
TAAAAGCTTTGCAAACTCTGATCTCCTTCCTCTTGTTATGTGCCATTTTCTTTCTATTCCTA
ATCGTTTCGGTTTGGAGTCCTAGGAGGCTGCGGAATGACCCGGTTGTCATGGTTAGCAAGG
CTGTTGGAAACATATATCTTGCATTCGACTCATTCATCCTAATTTGGAGAACCAAGAAGCT
AAAACACACCTTTCTTTTGATTTTGTGTCAGATTAGGTGCTGA ~~(SEQ ID NO: 15)~~

hT2R67 Conceptual Translation (BAC AC018630) (SEQ ID NO: 187)

MITFLYIFFSILIMVLFVLGNFANGFIALVNFIDWVKRKKISSADQILTALAVSRIGLLWALLLNW
YLTVLNPAFYSVELRITSYNAWVVTNHFSMWLAANLSIFYLLKIANFSNLLFLHLKRRVRSVIL

VILLGTLIFLVCHLLVANMDESMWAEEYEGNMTGKMKLRNTVHLSYLTVTTLWSFIPFTLSLIS
FLMLICSLCKHLKKMQLHGEGSQDLSTKVHIKALQTLISFLLLCAIFFLFLIVSVWSPRRLRNDP
VVMVSKAVGNIYLAFDSFILIWRTKKLKHTFLLILCQIRC ~~(SEQ ID NO: 16)~~

hT2R71 Full-Length cDNA (BAC AC073264) (SEQ ID NO: 188)

ATGCAAGCAGCACTGACGGCCTTCTTCGTGTTGCTCTTTAGCCTGCTGAGTCTTCTGGGGA
TTGCAGCGAATGGCTTCATTGTGCTGGTGCTGGGCAGGGAGTGGCTGCGATATGGCAGGT
TGCTGCCCTTGGATATGATCCTCATTAGCTTGGGTGCCTCCCGCTTCTGCCTGCAGTTGGTT
GGGACGGTGCACAACTTCTACTACTCTGCCCAGAAGGTCGAGTACTCTGGGGGTCTCGGCC
GACAGTTCTTCCATCTACACTGGCACTTCCTGAACTCAGCCACCTTCTGGTTTTGCAGCTGG
CTCAGTGTCCTGTTCTGTGTGAAGATTGCTAACATCACACACTCCACCTTCCTGTGGCTGA
AGTGGAGGTTCCCAGGGTGGGTGCCCTGGCTCCTGTTGGGCTCTGTCCTGATCTCCTTCAT
CATAACCCTGCTGTTTTTTTGGGTGAACTACCCTGTATATCAAGAATTTTTAATTAGAAAAT
TTTCTGGGAACATGACCTACAAGTGGAATACAAGGATAGAAACATACTATTTCCCATCCCT
GAAACTGGTCATCTGGTCAATTCCTTTTTCTGTTTTTCTGGTCTCAATTATGCTGTTAATTA
ATTCTCTGAGGAGGCATACTCAGAGAATGCAGCACAACGGGCACAGCCTGCAGGACCCCA
GCACCCAGGCTCACACCAGAGCTCTGAAGTCCCTCATCTCCTTCCTCATTCTTTATGCTCTG
TCCTTTCTGTCCCTGATCATTGATGCCGCAAAATTTATCTCCATGCAGAACGACTTTTACTG
GCCATGGCAAATTGCAGTCTACCTGTGCATATCTGTCCATCCCTTCATCCTCATCTTCAGCA
ACCTCAAGCTTCGAAGCGTGTTCTCGCAGCTCCTGTTGTTGGCAAGGGGCTTCTGGGTGGC
CTAG ~~(SEQ ID NO: 17)~~

hT2R71 Conceptual Translation (BAC AC073264) (SEQ ID NO: 189)

MQAALTAFFVLLFSLLSLLGIAANGFIVLVLGREWLRYGRLLPLDMILISLGASRFCLQLVGTVH
NFYYSAQKVEYSGGLGRQFFHLHWHFLNSATFWFCSWLSVLFCVKIANITHSTFLWLKWRFPG
WVPWLLLGSVLISFIITLLFFWVNYPVYQEFLIRKFSGNMTYKWNTRIETYYFPSLKLVIWSIPFS
VFLVSIMLLINSLRRHTQRMQHNGHSLQDPSTQAHTRALKSLISFLILYALSFLSLIIDAAKFISM
QNDFYWPWQIAVYLCISVHPFILIFSNLKLRSVFSQLLLLARGFWVA ~~(SEQ ID NO: 18)~~

hT2R75 Full-Length cDNA (SEQ ID NO: 190)

ATGATAACTTTTCTGCCCATCATTTTTTCCATTCTAATAGTGGTTACATTTGTGATTGGAAA
TTTTGCTAATGGCTTCATAGCATTGGTAAATTCCATTGAGTGGTTCAAGAGACAAAAGATC
TCTTTTGCTGACCAAATTCTCACTGCTCTGGCAGTCTCCAGAGTTGGTTTACTCTGGGTATT
AGTATTAAATTGGTATGCAACTGAGTTGAATCCAGCTTTTAACAGTATAGAAGTAAGAATT
ACTGCTTACAATGTCTGGGCAGTAATCAACCATTTCAGCAACTGGCTTGCTACTAGCCTCA
GCATATTTTATTTGCTCAAGATTGCCAATTTCTCCAACCTTATTTTTCTTCACTTAAAGAGG
AGAGTTAAGAGTGTTGTTCTGGTGATACTATTGGGGCCTTTGCTATTTTTGGTTTGTCATCT
TTTTGTGATAAACATGAATCAGATTATATGGACAAAAGAATATGAAGGAAACATGACTTG
GAAGATCAAACTGAGGAGTGCAATGTACCTTTCAAATACAACGGTAACCATCCTAGCAAA
CTTAGTTCCCTTCACTCTGACCCTGATATCTTTTCTGCTGTTAATCTGTTCTCTGTGTAAAC
ATCTCAAAAAGATGCAGCTCCATGGCAAAGGATCTCAAGATCCCAGCATGAAGGTCCACA
TAAAAGCTTTGCAAACTGTGACCTCCTTCCTCTTGTTATGTGCCATTTACTTTCTGTCCATA
ATCATGTCAGTTTGGAGTTTTGAGAGTCTGGAAAACAAACCTGTCTTCATGTTCTGCCAAG
CTATTGCATTCAGCTATCCTTCAACCCACCCATTCATCCTGATTTGGGGAAACAAGAAGCT
AAAGCAGACTTTTCTTTCAGTTTTGTGGCATGTGAGGTACTGGGTGAAAGGAGAGAAGCCT
TCATCTTCATAG ~~(SEQ ID NO: 19)~~

hT2R59 Conceptual Translation cDNA (SEQ ID NO: 191)

MITFLPIIFSILIVVTFVIGNFANGFIALVNSIEWFKRQKISFADQILTALAVSRVGLLWVLVLNW
YATELNPAFNSIEVRITAYNVWAVINHFSNWLATSLSIFYLLKIANFSNLIFLHLKRRVKSVVLVI
LLGPLLFLVCHLFVINMNQIIWTKEYEGNMTWKIKLRSAMYLSNTTVTILANLVPFTLTLISFLL
LICSLCKHLKKMQLHGKGSQDPSMKVHIKALQTVTSFLLICAIYFLSIIMSVWSFESLENKPVF
MFCEAIAFSYPSTHPFILIWGNKKLKQTFLSVLWHVRYWVKGEKPSSS (~~SEQ ID NO: 20~~)

hT2R59 Pseudogene (BAC AC018630) (SEQ ID NO: 192)

ATGGTATATTTTCTGCTCATCATTTTATCAATTCTGGTAGTGTTTGCATTTGTTCTTGGAAA
TTTTTCCAATGGCTTCATAGCTCTAGTAAATGTCATTGACTGGGTTAAGACACGAAAGATC
TCCTCAGCTGACCAAATCCTCACTGCTCTGGTGGTCTCCAGAATTGGTTTACTCTGGGTCAT
ATTATTACATTGGTATGCAAATGTGTTTAATTCAGCTTTATATAGTTCAGAAGTAGGAGCT
GTTGCTTCTAATATCTCAGCAATAATCAACCATTTCAGCATCTGGCTTGCTGCTAGCCTCAG
CATATTTTATTTGCTCAAGATTGCCAATTTCTCCAACCTTATTTTTCTCCACCTAAAGAAGA
GAATTAGGAGTGTTGTTCTGGTGATACTGTTGGGTCCCTTGGTATTTTTGATTTGTAATCTT
GCTGTGATAACCATGGATGACAGTGTGTGGACAAAAGAATATGAAGGAAATGTGACTTGG
AAGATCAAATTGAGGAATGCAATACACCTTTCAAACTTGACTGTAAGCACACTAGCAAACC
TCATACCCTTCATTCTGACCCTAATATGTTTTCTGCTGTTAATCTGTTCTCTGCATAAACAT
CTCAAGAAGATGCAGCTCCATGGCAAAGGATCTCAAGATCTCAGCACCAAGGTCCACATA
AAAGCTTTGCAAACTGTGATCTCCTTCCTCATGTTATATGCCATTTACTTTCTGTATCTAAT
CACATTAACCTGGAATCTTTGAACACAGCAGAACAAACTTGTATTCCTGCTTTGCCAAACT
CTTGGAATCATGTATCCTTCATTCCACTCATTCTTCCTGATTATGGGAAGCAGGAAACTAA
AACAGACGTTTCTTTCAGTTTTATGTCAGGTCACATGCTTAGTGAAAGGACAGCAACCCTC
AACTCCATAG (~~SEQ ID NO: 21~~)

hT2R69 Pseudogene (BAC AC018630) (SEQ ID NO: 193)

ATGATATGTTTTCTGCTCATCATTTTATCAATTCTGGTAGTGTTTGCATTTGTTCTTGGAAA
TGTTGCCAATGGCTTCATAGCTCTAGTAGGTGTCCTTGAGTGGGTTAAGACACAAAAGATC
TCATCAGCTGACCAAATTTCTCACTGCTCTGGTGGTGTCCAGAGTTGGTTTACTCTGGGTC
ATATTATTACATTGGTATGCAACTGTGTTTAATTTGGCTTCACATAGATTAGAAGTAAGAA
TTTTTGGTTCTAATGTCTCAGCAATAACCAAGCATTTCAGCATCTGGGTGTTACTAGCCTCA
GCATATTTCATTTGCTCAAGACTGCCAATTTCTCCAACCTTATTTTTCTCCACCTAAAGAAA
AGGATTAAGAATGTTGGTTTGGTGATGCTGTTGGGGCCCTTGGTATTTTTCATTTGTAATC
TTGCTCTGATAACCACGGGTGAGAGTGTGTGGACAAAAGAATATGAAGGAAATTTGTCTT
GGATGATCAAATTGAGGAATGCAATACAGCTTTCAAACTTGACTGTAACCATGCCAGCAA
ACGTCACACCCTGCACTCTGACACTAATATCTTTTCTGCTGTTAATCTATTCTCCATGTAAA
CATGTCAAGAAGATGCAGCTCCATGGCAAAGGATCTCAACATCTCAGCACCAAGGTGCAC
ATAAAAGCTTTGCAAACTGTGATCTCCTTCCTTATGTTATTTGCCATTTACTTTCTGTGTCT
AATCACATCAACTTGGAATCCTAGGACTCAGCAGAGCAAACTTGTATTCCTGCTTTACCAA
ACTCTTGGATTCATGTATCTTTTGTTCCACTCATTCATCCTGACTATGGGAAGTAGGAAGCC
AAAACAGACCTTTCTTTCAGCTTTGTGA (~~SEQ ID NO: 22~~)

mT2R33 Full-Length cDNA (BAC AC020619) (SEQ ID NO: 194)

ATGACCTCCCCTTTCCCAGCTATTTATCACATGGTCATCATGACAGCAGAGTTTCTCATCGG
GACTACAGTGAATGGATTCCTTATCATTGTGAACTGCTATGACTTGTTCAAGAGCCGAACG
TTCCTGATCCTGCAGACCCTCTTGATGTGCACAGGGCTGTCCAGACTCGGTCTGCAGATAA
TGCTCATGACCCAAAGCTTCTTCTCTGTGTTCTTTCCATACTCTTATGAGGAAAATATTTAT
AGTTCAGATATAATGTTCGTCTGGATGTTCTTCAGCTCGATTGGCCTCTGGTTTGCCACATG
TCTCTCTGTCTTTTACTGCCTCAAGATTTCAGGCTTCACTCCACCCTGGTTTCTTTGGCTGA
AATTCAGAATTTCAAAGCTCATATTTTGGCTGCTTCTGGGCAGCTTGCTGGCCTCTCTGGG
CACTGCAACTGTGTGCATCGAGGTAGGTTTCCCTTTAATTGAGGATGGCTATGTCCTGAGA
AACGCAGGACTAAATGATAGTAATGCCAAGCTAGTGAGAAATAATGACTTGCTCCTCATC
AACCTGATCCTCCTGCTTCCCCTGTCTGTGTTTGTGATGTGCACCTCTATGTTATTTGTTTC
TCTTTACAAGCACATGCACTGGATGCAAAGCGAATCTCACAAGCTGTCAAGTGCCAGAACC
GAAGCTCATATAAATGCATTAAAGACAGTGACAACATTCTTTTGTTTCTTTGTTTCTTACTT
TGCTGCCTTCATGGCAAATATGACATTTAGAATTCCATACAGAAGTCATCAGTTCTTCGTG
GTGAAGGAAATCATGGCAGCATATCCCGCCGGCCACTCTGTCATAATCGTCTTGAGTAACT
CTAAGTTCAAAGACTTATTCAGGAGAATGATCTGTCTACAGAAGGAAGAGTGA ~~(SEQ ID NO: 23)~~

mT2R33 Conceptual Translation (BAC AC020619) (SEQ ID NO: 195)

MTSPFPAIYHMVIMTAEFLIGTTVNGFLIIVNCYDLFKSRTFLILQTLLMCTGLSRLGLQIMLMT
QSFFSVFFPYSYEENIYSSDIMFVWMFFSSIGLWFATCLSVFYCLKISGFTPPWFLWLKFRISKLIF
WLLLGSLLASLGTATVCIEVGFPLIEDGYVLRNAGLNDSNAKLVRNNDLLLINLILLLPLSVFVM
CTSMLFVSLYKHMHWMQSESHLKSSARTEAHINALKTVTTFFCFFVSYFAAFMANMTFRIPYR
SHQFFVVKEIMAAYPAGHSVIIVLSNSKFKDLFRRMICLQKEE ~~(SEQ ID NO: 24)~~